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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/768,504	01/25/2001	Robert A. Priegnitz	P00,1841	5322

7590 02/27/2003
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EXAMINER

LAXTON, GARY L

ART UNIT PAPER NUMBER

2838

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

P.S.

Office Action Summary

Application No.

09/768,504

Applicant(s)

PRIEGNITZ ET AL.

Examiner

Gary L. Laxton

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-3 and 5-16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3 and 5-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman et al (US 5,589,032) in view of Shinada.

Bowman et al disclose, figures 15 or 16, a rectifier having a primary reference circuit (e.g. primary side of transformer 202); a transformer (e.g. 202) having a primary side connected to the reference primary circuit (e.g. primary side of transformer 202) and a secondary side (e.g. the secondary side of transformer 202); first and second rectifiers in synchronous connection (e.g. 206, 205) with three leads (e.g. inherent in most all transistors); first and second clamping transistors (e.g. 208, 209) connected between the secondary side of the transformer and the control leads of the first and second rectifiers; a load (Vout) connected to a same winding (210, 211) of the secondary side as the first and second clamping transistors (208, 209); a fixed voltage source (Vp) connected to the control leads of the first and second transistors (208, 209).

However, Bowman et al does not disclose first and second damping resistors connected to the control leads of the first and second clamping transistors.

Shinada teaches a synchronous rectification type converter with damping resistors connected to the control leads of transistors (51, 52) to damp the ringing in the secondary side (col. 8 lines 35-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize damping resistors to reduce ringing voltages generated across the clamping transistors as taught by Shinada.

4. Claims 1-3, 5, 6 and 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrington et al in view of Shinada.

Farrington et al disclose (figures 3A, 4, 5, 7, 8, 11, 12) a self-driven synchronous rectifier circuit (42); transformer (49, 70); secondary winding (Ns) with a first and second terminals; first synchronous rectifier (14) coupled to the second transformer terminal and having a control terminal; second synchronous rectifier (16) coupled to the first transformer terminal and having a control terminal. First switch (44) coupled to the first synchronous rectifier (14) control terminal; second switch (46) coupled to the second synchronous rectifier (16) control terminal. The first (44) and second switch (46) are also coupled to the same secondary winding. Switching transitions of the first (14) and second (16) synchronous rectifiers are initiated by a polarity reversal of the voltage of the secondary transformer winding. Furthermore, figures 3-5 and 7-13 all illustrate a fixed voltage source connected to the control leads of the transistors.

However, Farrington et al does not disclose first and second damping resistors connected to the control leads of the first and second clamping transistors.

Shinada teaches a synchronous rectification type converter with damping resistors connected to the control leads of transistors (51, 52) to damp the ringing in the secondary side (col. 8 lines 35-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize damping resistors to reduce ringing voltages generated across the clamping transistors as taught by Shinada.

5. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrington et al in combination with Bowman et al (US 5,589,032).

Farrington discloses the claimed invention as stated above with respect to claim 1 except for the claimed filter components and connections.

Bowman et al teach connecting inductors to the outputs for filtering furthermore, Bowman teach additional filtering with an added capacitor. Therefore, it would obvious to one having ordinary skill in the art at the time the invention was made to utilize plural inductors and an additional capacitor for filtering purposes in order to provide a highly desired smooth output voltage or output current.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (703) 305-7039. The examiner can normally be reached on Monday thru Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (703)308-1680. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7724 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



MICHAEL SHERRY
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